Amendments to the Drawings

Two replacement sheets of drawings are attached. The first replacement sheet of drawings includes FIGS. 1A and 1B with the prior art label. The second replacement sheet of drawings includes FIGS. 2A and 2B and removes the "Σ" character from components 218 and 268.

Attachment: Replacement Sheet of drawings including FIGS. 1A and 1B.

Replacement Sheet of drawings including FIGS. 2A and 2B.

REMARKS

Claims 1-44 are pending. Claims 1-6, 14-18, 25-32, 40 and 43 were previously withdrawn from consideration. Claims 7-13, 19-24, 33-39, 41, 42 and 44 stand rejected. Claims 10, 22 and 36 are cancelled without prejudice.

I. DRAWINGS

The Examiner has object to the drawings. Applicants have amended the drawings and enclose two replacement sheets of drawings. The first replacement sheet of drawings includes FIGS. 1A and 1B with the prior art label. The second replacement sheet of drawings includes FIGS. 2A and 2B and removes the "Σ" character from components 218 and 268.

For at least the above reasons, it is therefore respectfully requested that the objection be withdrawn with respect to the drawings.

II. OBJECTION WITH RESPECT TO CLAIM 39

The Examiner has objected to claim 39. Applicants have amended claim 39.

For at least the above reasons, it is therefore respectfully requested that the objection be withdrawn with respect to claim 39.

III. REJECTION UNDER 35 U.S.C. § 112, ¶ 2, WITH RESPECT TO CLAIMS 10, 22 AND 36

Claims 10, 22 and 36 stand rejected under 35 U.S.C. § 112, ¶ 2, as being indefinite.

It appears that the Examiner has strayed from the recited elements in claims 10, 22 and 36 and added extra limitations not recited in claims 10, 22 and 36. The extra limitations added by the Examiner are the cause for confusion. The Examiner is encouraged to carefully review the Examiner's interpretation of recited elements as set forth in the Office Action at page 4 with the actual recited elements as set forth in claims 10, 22 and 36.

The attention of the Examiner is also drawn to FIG. 5, for example, and to the specification at page 20, lines 9-17, for example, and to the specification at page 10, lines 18-28, for example.

For at least the above reasons, it is respectfully requested that the rejection under 35 U.S.C. § 112, ¶ 2, be withdrawn with respect to claims 10, 22 and 36.

Although claims 10, 22 and 36 are cancelled, without prejudice, the issue is not moot since the elements recited in claims 10, 22 and 36 have been incorporated into their respective independent claims.

IV. REJECTION UNDER 35 U.S.C. § 103(a) WITH RESPECT TO CLAIMS 10, 22 AND 36

Claims 10, 22 and 36 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,888,809 ("Foschini") in view of Wallace, and still further in view of U.S. Patent No. 7,248,656 ("da Silveira"). Applicants respectfully traverse the rejection for at least the reasons as set forth below.

It is respectfully submitted that the Examiner has not established that da Silveira is prior art with respect to the present application. The present application claims benefit from and priority to U.S. provisional applications filed March 17, 2003 and May 1, 2003.

On the other hand, da Silveira has a filing date of September 24, 2003, which is later than the filing dates of said U.S. provisional applications. Thus, by comparing the filing dates, it appears that da Silveira is not prior art with respect to the present application.

It is noted that da Silveira is a continuation-in-part of another U.S. application filed December 2, 2002. However, the Examiner has not proven as part of his *prima facie* case of obviousness, that da Silveira, in relevant part, finds support in said another U.S. application. Without further supporting evidence presented by the Examiner, da Silveira is not entitled to the early filing date.

Without more, the obviousness rejection cannot be maintained based, in part, on da Silveira.

Furthermore, since the Examiner has alleged that Foschini in view of Wallace ("Foschini-Wallace") teaches, for example, the dividing, the weighting and the combining after the upconverting, as set forth, for example, in claim 7, the Examiner cannot now reasonably and logically justify the weighting and the combining as set forth in claim 10 prior to the upconverting.

It is respectfully noted that, with respect to Foschini-Wallace, the Examiner has already **modified** Foschini, which according to the Examiner describes the dividing, the weighting and the combining before the upconverting, so that Foschini-Wallace allegedly teaches the dividing, the weighting and the combining after the upconverting.

Now the Examiner is trying to have it both ways by modifying Foschini-Wallace in view of da Silveira ("Foschini-Wallace-da Silveira") to add the weighting and combining prior to the upconverting as set forth, for example, in claim 10.

In support of the combination, the Examiner cites da Silveira at col. 3, lines 27-31, which the Examiner characterizes as the teachings of da Silveira optimizing the SNR of sector signals. See Office Action at page 9.

Here is the logical inconsistency: the Examiner is arguing that da Silveira, which teaches the weighting and combining prior to the upconverting as set forth in claim 10, would motivate one of ordinary skill in the art because the teachings of weighting and combining prior to the upconverting "[optimizes] the SNR of sector signals". In other words, it is advantageous to weight and combine prior to upconverting.

However, if weighting and combining prior to the upconverting optimizes the signal-to-noise ratio (i.e., weighting and combining prior to upconverting is advantageous), then this teaches away from the Examiner's original modification of Foschini, which according to the Examiner describes the dividing, the weighting and the combining before the upconverting, to

Foschini-Wallace, which according to the Examiner advantageously teaches the dividing, the weighting and the combining after the upconverting.

Which is it? If the Examiner focuses on the alleged advantages of da Silveira, then the Examiner is arguing against changing Foschini with Wallace. If the Examiner focuses on the alleged advantages of modifying Foschini with Wallace, then the Examiner is arguing against the alleged advantages of da Silveira.

Which is advantageous? If the Examiner now believes weighting and combining prior to upconverting is advantageous, then the Examiner cannot argue for modifying Foschini (which allegedly describes weighting and combining prior to upconverting) with Wallace to allegedly teach weighting and combining after the upconverting.

For at least the above reasons, it is believed that an obviousness rejection based on the combination of Foschini, Wallace and da Silveira cannot be maintained.

For at least the above reasons, it is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 10, 22 and 36.

Although claims 10, 22 and 36 are cancelled, without prejudice, the issue is not moot since the elements recited in claims 10, 22 and 36 have been incorporated into their respective independent claims.

V. REJECTION UNDER 35 U.S.C. § 103(a) WITH RESPECT TO CLAIMS 7-9, 11, 13, 19-21, 23, 44, 33-35, 41 AND 37-40

Claims 7-9, 11, 13, 19-21, 23, 44, 33-35, 41, 37-40 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,888,809 ("Foschini") in view of U.S. Patent No.

7,024,166 ("Wallace"). Applicants respectfully traverse the rejection for at least the reasons as set forth below.

Independent claims 7, 19, 33 and 37 have been amended in view of the discussions with respect to claims 10, 22 and 36. Since the same or similar elements in claims 10, 22 and 36 have been incorporated in the independent claims, it is believed that no new search is necessitated by the amendments. In fact, if the arguments with respect to claims 10, 22 and 36 are persuasive, then it implies that the Office Action was in error. In either event, the subsequent Office Action should be a Non-Final Office Action.

For at least the above reasons, it is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 7-9, 11, 13, 19-21, 23, 44, 33-35, 41, 37-40.

VI. REJECTION UNDER 35 U.S.C. § 102(e)/103(a) WITH RESPECT TO CLAIM 37

Claim 37 stands rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,993,299 ("Sugar") or under 35 U.S.C. § 103(a) as being obvious over Sugar. Applicants respectfully traverse the rejection for at least the reasons as set forth below.

As mentioned above, independent claim 37 has been amended. It is believed that no new search is necessitated by the amendment.

For at least the above reasons, it is therefore respectfully requested that the rejection under 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a) be withdrawn with respect to claim 37.

VII. REJECTION UNDER 35 U.S.C. § 102(e)/103(a) WITH RESPECT TO CLAIMS 37-39

Claims 37-39 stands rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,834,972 ("Schiemenz"). Applicants respectfully traverse the rejection for at least the reasons as set forth below.

As mentioned above, independent claim 37 has been amended. It is believed that no new search is necessitated by the amendment.

For at least the above reasons, it is therefore respectfully requested that the rejection under 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a) be withdrawn with respect to claims 37-39.

VIII. CONCLUSION

Applicants do not necessarily agree or disagree with the Examiner's characterization of the documents made of record, either alone or in combination, or the Examiner's characterization of recited claim elements. Furthermore, Applicants respectfully reserve the right to argue the characterization of the documents of record, either alone or in combination, to argue what is allegedly well known, allegedly obvious or allegedly disclosed, or the characterization of the recited claim elements should that need arise in the future.

With respect to the present application, Applicants hereby rescind any disclaimer of claim scope made in the parent application or any predecessor or related application. The Examiner is advised that any previous disclaimer of claim scope, if any, and the alleged prior art that it was made to allegedly avoid, may need to be revisited. Nor should a disclaimer of claim scope, if any, in the present application be read back into any predecessor or related application.

In view of at least the foregoing, it is respectfully submitted that the present application is in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

The Commissioner is hereby authorized to charge any additional fees, to charge any fee deficiencies or to credit any overpayments to the deposit account of McAndrews, Held &

Malloy, Account No. 13-0017.

Date: June 20, 2008

Respectfully submitted,

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